

### **Remarks**

Claims 14, 15, 23, 24, and 30-36 were previously pending in this application.

Claims 15, 31, and 36 were previously canceled, without prejudice or disclaimer.

Claims 38-41, which were withdrawn from consideration as being directed to a non-elected invention, are now canceled without prejudice or disclaimer.

Claims 14, 32, and 33 are currently amended without introducing new matter.

Claims 42-58 are newly added without introducing new matter. Support for the amendments and new claims can be found throughout the specification and drawings as originally filed.

As a result, claims 14, 23, 24, 30, 32-35, and 42-58 are pending for examination with claims 14, 30, 33, 51, and 54 being independent claims.

### **Indefiniteness Rejections**

The phrase “the impurities” in claim 14 lacked antecedent basis. Independent claim 14 is accordingly amended to overcome the rejection and to clarify the nature of the impurities.

Claim 32, which depends from independent claim 30, is rejected because it should be directed to a wafer boat, rather than to an article. Dependent claim 32 is accordingly amended.

Accordingly, Applicants request reconsideration and withdrawal of the indefiniteness rejections.

### **Rejections Under 35 U.S.C. §§ 102/103**

Claim 14 is rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the teaching of Japanese Publication Nos. 10-228974 (hereinafter “JP ’974”) and 07-328360 (hereinafter “JP ’360”).

Applicants disagree that the teachings of any of one of JP ’974 or JP ’360 anticipate or would have rendered obvious the subject matter of claim 14. Again, Applicants note that these references fail to explicitly teach recrystallized silicon carbide having a pore size of at

least 15  $\mu\text{m}$  and comprising impurities of copper, nickel, chromium, and calcium at a total concentration of less than 400 ppm. Applicants restate that the failure to recite a particular element cannot be necessarily implied. The fact that a certain impurity may be present in the teaching of JP '974 or JP '360 is not sufficient to establish the inherency of that characteristic. The evidence must make clear that the missing descriptive matter is necessarily present in the reference, and that it would be so recognized by persons of ordinary skill in the art. Further, an allegedly inherent limitation may not be established by probabilities or possibilities and there must be a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent limitation necessarily flows from the teachings of the cited references. In this case, no representation or explanation has been set forth to support the notion that these references necessarily teach the claimed subject matter. Indeed, Applicants have previously set forth reasons why the claimed impurity cannot be present in the teachings of the cited references, i.e., mechanical processing of silicon carbide to produce the heaters would necessarily introduce metallic impurities.

Claims 14, 15, 23, 24, and 30-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as would have been obvious over the teaching of Dubots et al. in U.S. Patent No. 6,162,543 (hereinafter "Dubots").

Applicants also disagree that the subject matter of claim 14 is anticipated or would have been obvious over the teaching of Dubots.

Dubots fails to teach an article comprising recrystallized silicon carbide having a pore size of at least about 15  $\mu\text{m}$  with a pore surface area of less than about 0.04  $\text{m}^2/\text{g}$ , and comprising impurities at a concentration of less about 400 ppm, wherein the impurity is at least one of iron, copper, nickel, chromium and calcium.

Dubots, as noted previously, teaches a siliconized wafer boat comprising silicon carbide. Because, however, Dubots fails to teach a finished wafer boat comprising recrystallized silicon carbide having pores interconnected to form a network and comprising an active impurity component at a concentration of less than 1 ppm, wherein the active impurity component is one of iron, copper, nickel, chromium, and calcium, the subject matter

of independent claim 30 as well as dependent claims 31 and 32 cannot be anticipated by nor would have been obvious over the teaching of Dubots.

Further, because Dubots fails to teach an article comprising a recrystallized silicon carbide member having an interconnected network of pores that have a pore size of at least about 5  $\mu\text{m}$  and comprising a nickel impurity concentration at or below 5 ppm, the subject matter of independent claim 33 and dependent claims 34 and 36 cannot be anticipated by nor would have been obvious over the teaching of this reference.

The intermediate structure of Dubots cannot be considered a wafer boat because it contains undesirable impurities that vaporize during semiconductor wafer production absent siliconizing that traps these impurities.

Thus, Dubots cannot anticipate or render obvious the subject matter of independent claim 14.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 and § 103 is requested.

#### **New Claims 42-58**

New claims 42-58 are directed to wafer boats, wafer boat bodies, or a wafer support. These new claims recite advantageous features of the invention and are patentable over the teachings of the cited references.

Examination and allowance of these claims is respectfully requested.

#### **Conclusion**

In view of the foregoing Amendments and Remarks along with the Amendments and Remarks presented in the Response filed August 15, 2007, this application is in condition for allowance; a notice to this effect is respectfully requested. If the examiner believes that the application is not in condition for allowance, the examiner is requested to call Applicants' attorney at the telephone number listed below.

If this Response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there

is a fee occasioned by this Response, please charge any deficiency to Deposit Account No. 50/2762 (Ref. No. S1432-700819).

Respectfully submitted,  
*Yeshwanth Narendar et al., Applicants*

By: /elias domingo/  
Elias Domingo, Reg. No. 52,827  
LOWRIE, LANDO & ANASTASI, LLP  
One Main Street  
Cambridge, Massachusetts 02142  
United States of America  
Telephone: 617-395-7000  
Facsimile: 617-395-7070

SGC Ref. No.: E4362  
Docket No.: S1432-700819  
Date: October 31, 2007